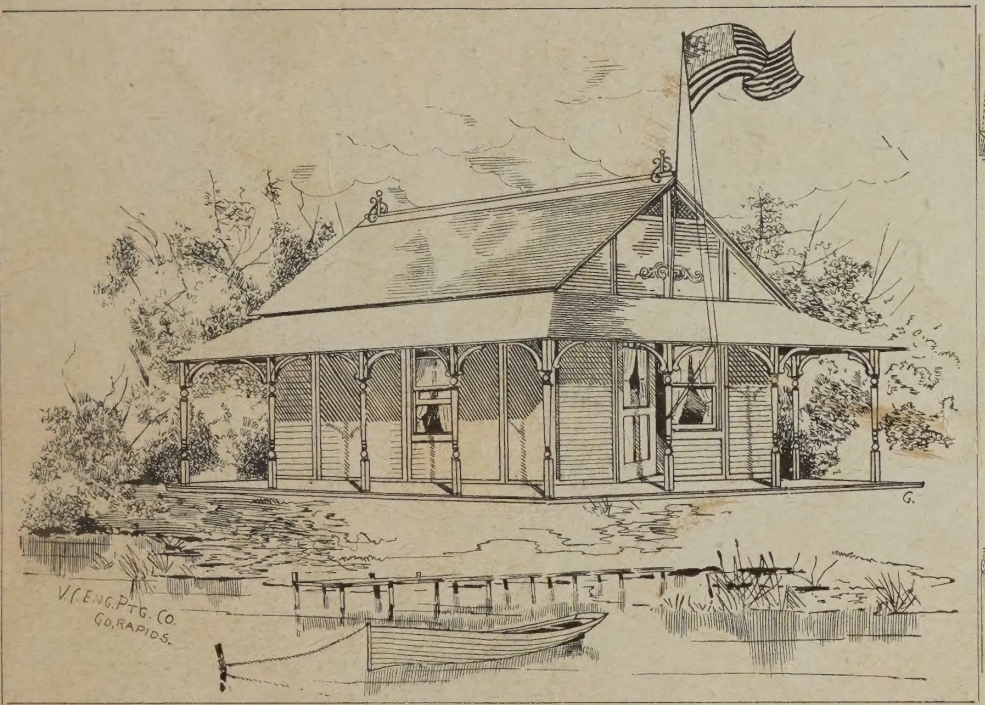

The Iron Cottage Co.

MANUFACTURERS OF

PORTABLE HOUSES,

With Concealed Tubular
Iron Frames.

Grand Rapids, - Michigan.

AVERY LIBRARY
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THE IRON COTTAGE CO.

H. LEONARD & SONS, Proprietors.

. . Established 1844 . .

Also Proprietors of the Grand Rapids Refrigerator Co.

Manufacturers of the Famous LEONARD CLEANABLE REFRIGERATORS.

Ferry and Ottawa Streets,

Grand Rapids, Mich.

MANUFACTURERS OF

PORTABLE HOUSES.

WITH CONCEALED TUBULAR IRON FRAMES.

Suitable for Summer Resorts, Camping Parties, Miners, Contractors, Photograph Galleries, Bath Houses, Fruit Stands, Summer Kitchens, Dormitories, Storm Doors, Cheap Residences, or for any purpose where a Light, Cheap Building is needed. *Easily set up or taken down*, or they may be left to stand permanently.

The following pages show the details of construction, by which Strength, Lightness, Elegance and Durability are attained.

AVERY LIBRARY
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DETAILS OF CONSTRUCTION

----OF----

C. H. Leonard's Patent Portable Wooden Houses,

WITH TUBULAR IRON FRAMES.

The walls and roof of these houses are made of Clear Michigan Pine, oil finished inside and painted on the outside two coats pure lead of any desired shade.

Each panel is 30 inches wide; the length of the panels is 90 inches for the walls; the length of the roof panels vary in proportion to the width of the house. The panels are made of regular siding $\frac{3}{8}$ inch thick, 4 inches wide, with $\frac{1}{2}$ inch lap. The siding is set in strong frames $1\frac{1}{8}$ inch thick by 4 inches wide. These frames are grooved on the sides to receive the tubular iron which constitutes the frame-work of the house. These tubes are only $\frac{3}{4}$ of an inch in diameter, and are completely concealed between the panels. The panels simply hook together with a patent drawing hook shaped like a quadrant, which draws the walls together absolutely tight. The siding is flush and smooth on the inside, and the house can be lined with wool felt, if desired, for winter use. The siding alone, however, is the usual construction for summer houses.

The roof panels are the same as the side panels, and are covered with the famous P. & B. Rubberoid Roofing, and are guaranteed storm-proof. The truss work of wire ropes and turn buckles on the inside of the houses, in connection with the tubular iron frames, makes the house so strong that a hurricane could not crush it. The doors and windows and plain panels are interchangeable, so they may be placed anywhere. These houses can be set up ready to live in all complete in a few hours. They can also be taken down and transported without injury and set up in other places. Freight is very cheap on these houses. If desired, we will quote a price delivered at any railroad station in the United States.

The Leonard Patent Portable Wooden Houses . . . .

WITH CONCEALED TUBULAR IRON FRAMES.

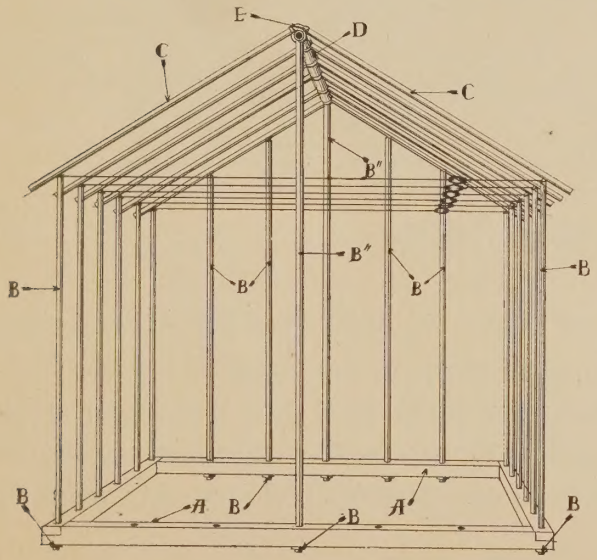


FIG.1

THIS ILLUSTRATION, Figure 1, shows the Tubular Iron Frame Work of the House. The letter A shows the sills of 4 x 4 Pine pinned together at the corners. B are the tubular iron studs $\frac{3}{4}$ of an inch in diameter. C are the rafters of the same material. D is a tubular iron ridge pole. E are hooks in the ends of the rafters, which clasp the ridge pole. The horizontal lines are tightening cables adjusted by turn buckles. This construction makes a truss out of each pair of rafters. When the turn buckles are tightened the tendency is to lift the the ridge pole, but as that is fastened to the sill by the iron stud "B" it is impossible to lift the ridge pole and the whole house is solid as a trussed iron bridge.

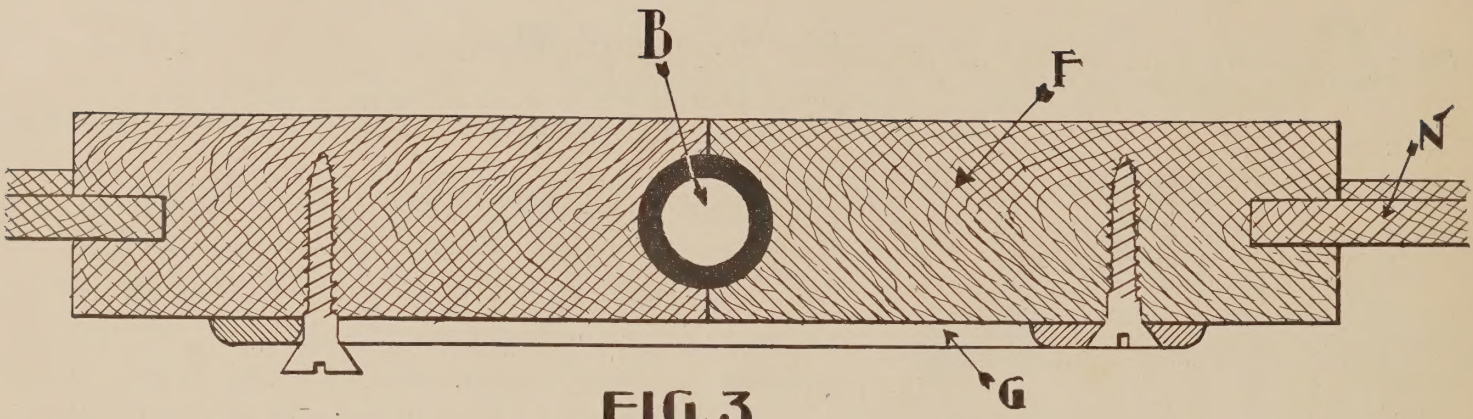


FIG. 3

This illustration shows the *Full Thickness* of the side walls of the house. B is the concealed tubular iron stud. F is one side of a panel frame. One side of another panel frame is shown at the left of the stud. N is the siding, $\frac{3}{8}$ inch thick, flush on the inside, lap on the outside. The siding is cut in 24 inch lengths and with the panel frame on each side makes the panels 30 inches wide. G is the drawing hook, better shown in Figure 2, which draws the panels together tightly around the stud. The panels are 90 inches high and only weigh 25 pounds each.

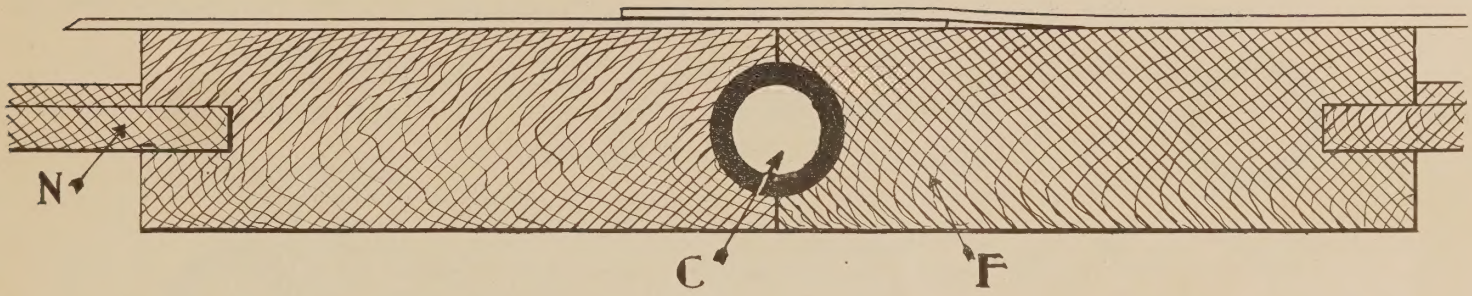


FIG.5.

This illustration shows the *Full Thickness* of the roof. C is the tubular iron rafter. F is the panel frame and N the lapped siding as before. This material has sufficient lap to make the roof water tight, but to make everything doubly sure, and especially to cover the joint at the rafters, we cover each roof panel with the famous P. & B. Patent Ruberoid Roofing, lapping the joint as shown, and pasting it down with paint. This is equivalent to a continuous sheet of Ruberoid over the entire house, and adds much to the insulation. The roof panels are hooked together on the under side with drawing hooks same as the side panels. Each panel is 30 inches wide. The length varies according to the width of the house.

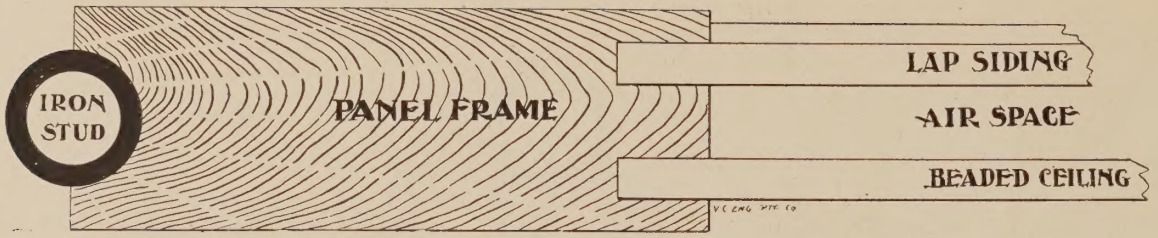


Fig. 10. DOUBLE WALLED HOUSES. Patented Jan. 7, 1896.

We show above in Figure 10 a full size section of our Double Walled Portable Houses with air space between the walls. These houses are much warmer in winter and cooler in summer than the single walled houses. We make the roofs to these houses in the same way, with the addition of the ruberoid roofing. It is evident that no heat from radiation can reach the inside walls of these houses in hot weather, or escape to the outside wall when the inside is heated by a stove in cold weather. As the difference in cost between the single and double walled houses is very slight, owing to both requiring the same frame, floor and outside walls, we recommend these houses to all who desire a comfortable house. For tropical climes we furnish rolling blinds instead of windows when desired. They are sold on the same list as the single walled houses, but at a different discount.

IRON COTTAGE COMPANY.

GRAND RAPIDS, MICHIGAN.

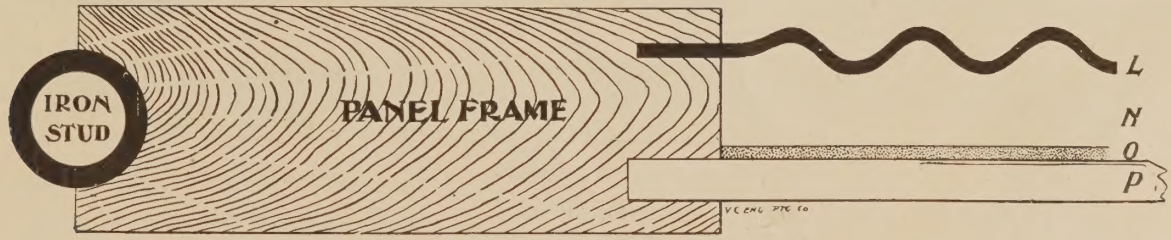


Fig. 9. FOUR WALLED IRON HOUSE, Patented Jan. 7, 1896.

The above illustration shows our latest method for the construction of Corrugated Iron Houses. These are for use inside the fire limits of large cities where wooden houses are not allowed. The illustration shows the full thicknes of the house. L is the Corrugated Iron. N is the Air Space for insulation. O is Waterproof Sheathing. P is beaded Pine Ceiling, for the inside finish. The inside can either be oiled and varnished or painted any desired tint. The outside is always painted two coats best lead and oil, any color. The roofs are made as described under figure 10, as the iron would be covered by ruberoid which is nearly fire proof. These houses are sold on the same list as the single walled wooden houses, but at different discount.

GALVANIZED IRON HOUSES.

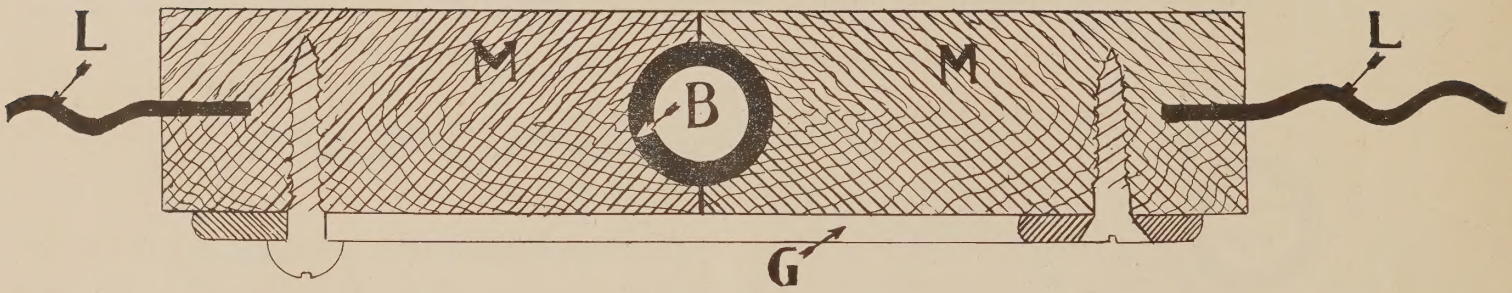


Figure 8.

In some large cities the erection of wooden houses inside the fire limits is not allowed, but houses whose side walls are of iron will be acceptable. To meet this demand we offer our Corrugated Galvanized Iron Houses, made as shown in the illustration Figure 8. The illustration shows the **full thickness** of the house. The iron is shown a little heavier than it is, as we use No. 26 iron crimped across the panel, corrugations one-half inch apart. As the panels are only 24 inches wide inside, No. 26 iron when corrugated is strong enough for so short a span. It is nailed into the wooden frames. These houses go together the same as the wooden houses. B is the Tubular Iron Stud, G is the drawing hook, M and M are each one side of a panel frame, L is the corrugated iron. The roofs of these houses are made of wood, but each panel is covered with a sheet of fireproof Ruberoid Roofing, as shown on page 5 of the catalogue. If wool felt is desired on the inside of the side walls for extra insulation, we will furnish it at 5 cents per square yard extra net. You can hang wall paper on the wool felt if you desire to decorate, and when the house is taken down the paper can be neatly cut on the iron stud. All of our houses have a good floor of $\frac{7}{8}$-inch matched pine made in sections. Our Corrugated Iron Houses are sold from the same list as our Wooden Houses, but at a different discount. These houses weigh the same as single wall Wooden Houses.

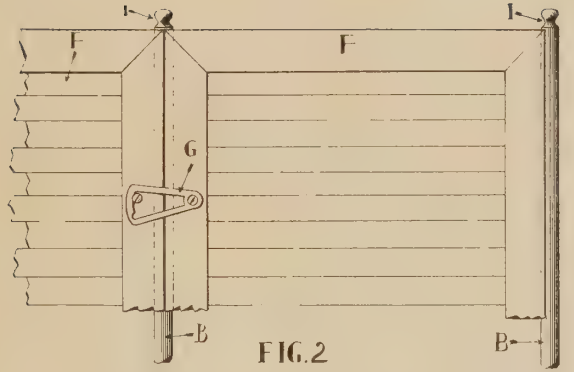
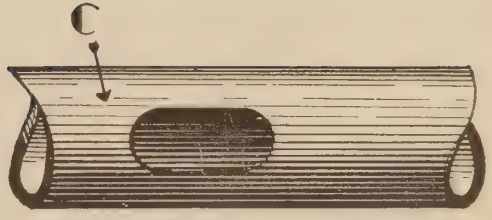


FIG. 2

This illustration shows the side panels as they appear from the inside of the house. They are made of clear Michigan Pine, finished in oil on the inside and painted on the outside. The frame F is 1⅛ inches thick by 3½ inches wide and receives the siding on its inside and conceals the studs B in grooves on the outside as shown at Figure 3. By lapping the siding shrinking and swelling of the material is provided for, and as there are no veneers to scale off, the house is as durable and strong as any regularly made building.

This illustration shows the method of fastening the tubular iron studs to the rafters. Each stud is provided with a cast bronze head "I," which is flat on the sides and firmly riveted into the top of the stud. A slot "C" is made in the rafter. When the head is inserted a quarter turn locks it.

What could be easier?



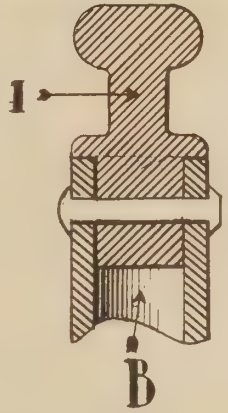


FIG. 6.

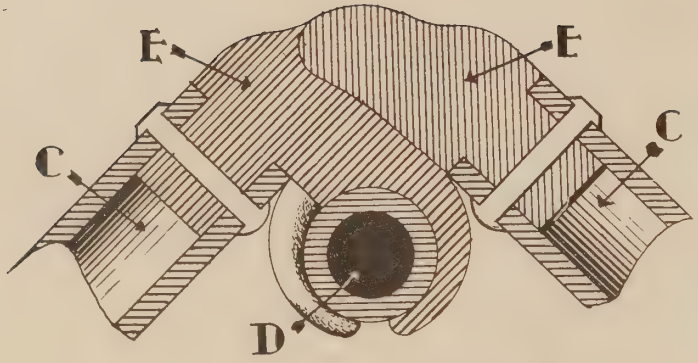


FIG. 7.

This illustration shows the method of fastening the rafters to the ridge pole. A cast bronze hook "E" is riveted into the end of the rafter "C." As the rafter is raised into position the hook creeps around to the under side of the ridge pole "D," and as the hooks interlock they make a continuous metallic band from one sill to the other, grasping the ridge poles so tightly that they cannot be loosened unless the rafters are again brought to a perpendicular position. This work is quickly done, the rafters simply hook onto the ridge pole; that is all there is to it. The drawing is full size.

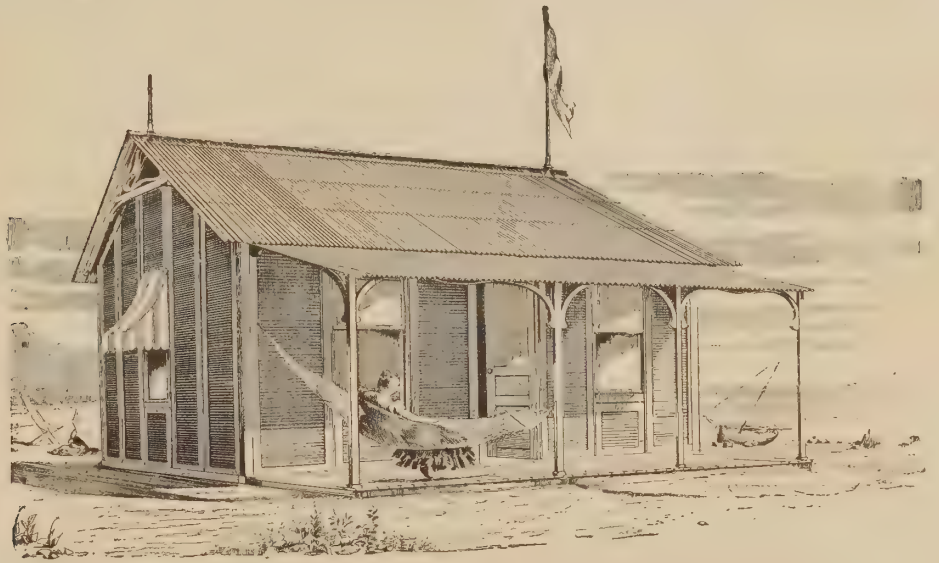
We call special attention to the many advantages this iron frame-work offers in shipping:

1st. It occupies very little room. A bundle or two of iron pipe is all there is to the entire frame-work of an ordinary house.

2d. It can be shipped anywhere without fear of damage. It is next to impossible to injure or break it in any way.

3d. It is much lighter than wood of the same strength. Another advantage consists in the fact that when the house is up there is no unsightly studding projecting into the room as in the ordinary construction. The house is smooth and completely finished on the inside.

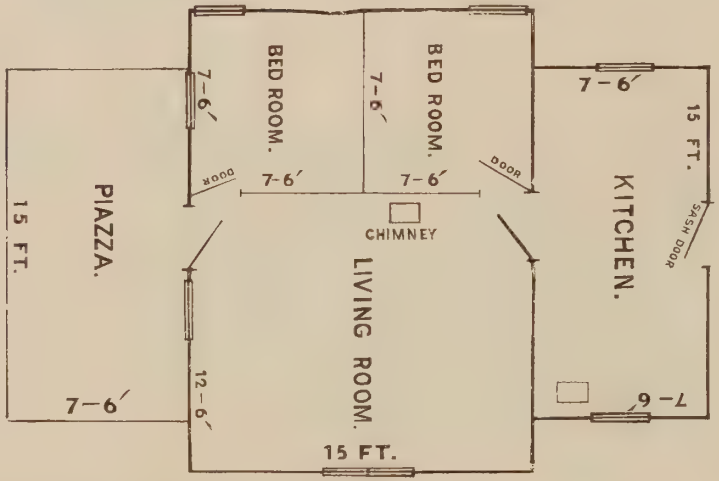
THE LEONARD PORTABLE HOUSES.



Portable House 12½ feet wide by 17½ feet long, with Piazza.

PRICE WITHOUT PIAZZA, - - $217.50
PRICE WITH PIAZZA - - - 270.00

THE LEONARD PORTABLE HOUSES.



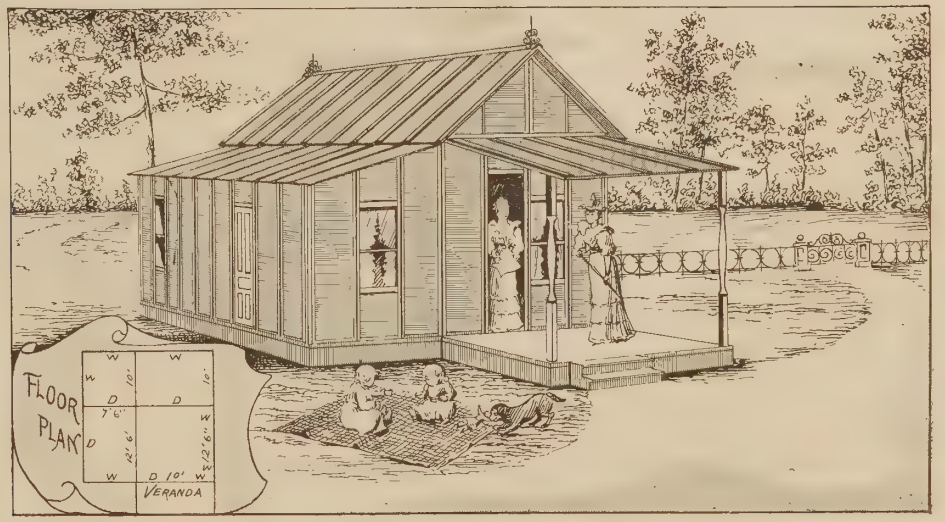
GABLE END.

The above illustration shows the plan of a house 15 feet wide by 20 feet long, with kitchen and piazza.

You can plan houses to suit yourself. Let a certain space, say 1 inch or ½ inch, represent one panel or 2½ feet of the length and width of the house, make a round dot at the end of each space to represent the iron studs. You can then place your doors and windows wherever you like, as they are interchangeable with plain panels. A reasonable amount of partitions, doors and windows will be allowed in any house without extra charge. Partitions can be placed anywhere opposite the studs. Doors, windows and plain panels are interchangeable. We keep these houses constantly on hand and can ship promptly. Ventilators are provided in the gables. A chimney goes with each house.

Price without Kitchen or Piazza, - - -	**$260.00**
Price with Kitchen and without Piazza, - - -	**323.00**
Price with Kitchen and with Piazza, - - -	**368.00**

THE LEONARD PORTABLE HOUSES.



Plan and View of a House 10x22½ feet with Lean-to and Piazza.

Price of House only	$220.00
Price of House and Lean-to	307.00
Price of House, Lean-to and Piazza,	337.00

THE LEONARD

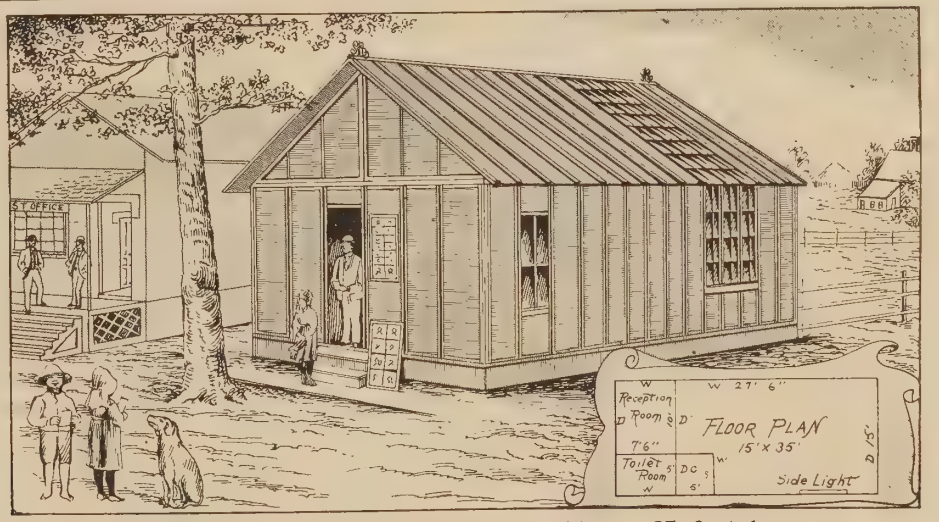
Portable House.

10 x 15

With Piazza All Around.

Price of House only - -	**$160.00**
Price of Piazza, 80 feet at $3.00,	**$240.00**
Total, - -	**$400.00**

The Leonard Portable Photograph Galleries. . .



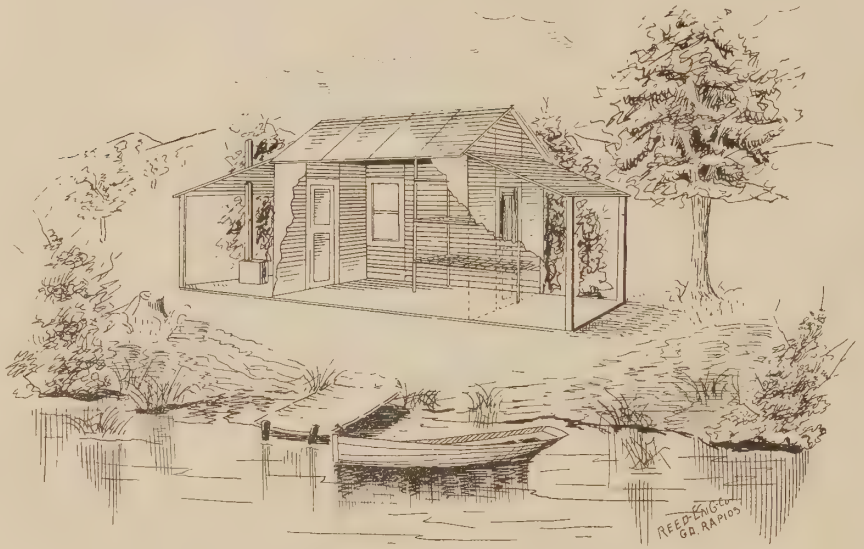
Plan and View of Gallery 15 feet wide by 35 feet long.

For piazza add price of the piazza of the desired length as given under houses, to the price of plain gallery. Sky-light and dark rooms placed as desired.

PRICE, $425.00.

THE • LEONARD • PORTABLE • HOUSES.

This house is designed to accommodate three people in the smallest possible space. The beds are woven wire mattresses stretched on strong frames 2½ feet wide by 6 feet long, hinged to the wall. Cooking is intended to be done on the back piazza, from which a curtain should be hung as a wind break.



These houses are so light they can be taken right into the woods on a wagon and set up in three hours time. Their strength offers great security, which is not afforded by tents. For weight see page 17.

Hunter's Cabin 7½x10, 6 ft. 6 in. to Eaves, 9 ft. 6 in. to Peak.

DIMENSIONS AND PRICES.

House 7½x5½, $65.00;	2 Piazzas for same 5½x5 @ $15.00, $30.00;	Total,	$ 95.00
House 7½x7½, 82.50:	2 Piazzas for same 7½x5 @ 18.00, 36.00;	Total,	118.50
House 7½x10, 100.00;	2 Piazzas for same 7½x5 @ 18.00, 36.00;	Total,	136.00

Bunk of three beds, net $7.50. Bunk of two beds, net $5 00.

PRICE LIST OF BATH HOUSES.

Houses 5 ft. Wide, 6 ft. 6 in. to Eaves.

SINGLE BATH OR OUT-HOUSES.

	Weight Crated	Price
1 House 5x5, bench or seat, window in door	600	$ 45 00
2 Bath Houses, 5x10, 2 doors and partition	920	75 00
3 " " 5x15, 3 doors and 2 partitions	1240	100 00
4 " " 5x20, 4 " " 3 "	1560	125 00

DOUBLE BATH HOUSES—Same as above, Back to Back.

4 Bath Houses, 10x10, 4 doors	1050	105 00
6 " " 10x15, 6 "	1625	140 00
8 " " 10x20, 8 "	2200	175 00
10 " " 10x25, 10 "	2775	210 00
12 " " 10x30, 12 "	3330	245 00

One advantage in Portable Bath Houses lies in the fact that they can be taken down at the end of each season and stored where they will not be buried by the drifting sand. As they usually set near the water's edge, it is sometimes an expensive job to dig away the sand from the non-portable houses As this is a finely finished article, its price should not be compared with rough board work.

PRICE LIST OF HOUSES 7½ FT. WIDE.

6 ft, 6 in. to Eaves, 9 ft. 6 in. to peak,

These houses are used mostly for Hunter's Cabins in the short lengths, and for Photograph Galleries in the longer lengths.

HUNTER'S CABINS.

Size	Weight	Price
7½x 5 —2 doors, 2 windows	850	$ 65 00
7½x 7½—2 " 2 "	1000	82 50
7½x10 —2 " 2 "	1300	100 00
7½x12½—2 " 3 "	1530	117 50
7½x15 —2 " 4 "	1760	135 00

PHOTOGRAPH GALLERIES.

With 2 Panels of Sky-Light, 2 Panels of Side-Light and Dark Room.

7½x17½—1 door, 4 windows	2000	160 00
7½x20 —1 " 4 "	2250	177 50
7½x22½—1 " 4 "	2500	195 00
7½x25 —1 " 4 "	2750	212 50

Other doors and windows may be had if desired without extra cost.

PRICE LIST OF HOUSES 10 FT. WIDE.

7 ft. 6 in. to Eaves, 11 ft. to Peak.

Size	Weight Crated	Price
10x10 —1 door, 4 windows	1500	$120 00
10x12½—1 " 4 "	1740	140 00
* 10x15 —1 " 4 "	1980	160 00
10x17½—2 " 6 "	2220	180 00
10x20 —2 " 6 "	2460	200 00
10x22½—2 " 6 "	2700	220 00
10x25 —2 " 8 "	2940	240 00
10x27½—3 " 8 "	3180	260 00
10x30 —3 " 8 "	3420	280 00

Partitions reaching to the eaves may be placed as desired without extra charge.
*This is the house shown in illustration on the cover, with piazza added.

PHOTOGRAPH GALLERIES.

Same price as above, except add $10.00 net for sky and side lights, 3 panels wide. No extra charge for dark room or partitions. Good curtains will be substituted for partitions when desired.

PRICE LIST OF HOUSES 12½ FEET WIDE.

7 ft. 6 in. to Eaves, 12 ft. to Peak.

12½x12½—1 door, 4 windows	2200	$162 50
12½x15 —2 " 4 "	2500	195 00
12½x17½—2 " 6 "	2800	217 50
12½x20 —2 " 6 "	3100	240 00
12½x22½—2 " 6 "	3400	242 50
12½x25 —2 " 8 "	3800	265 00
12½x27½—3 " 8 "	4100	287 50
12½x30 —4 " 8 "	4500	310 00

Partitions reaching to the eaves may be placed as desired without extra charge.

PHOTOGRAPH GALLERIES.

Same price as above, except add $12.50 net for sky and side-lights, 3 panels wide. No extra charge for dark rooms. Windows may be added or omitted and partition for toilet room placed where desired. Good curtains will be substituted for partitions if desired.

CHILDREN'S PLAY HOUSES.

Size 5x5 —Sash door and 3 windows, 6 ft. 6 in. to Eaves	$50 00
" 5x7½— " " " 3 " 6 " 6 " "	65 00

PRICE LIST OF HOUSES 15 FT. WIDE.

7 ft. 6 in. to Eaves, 13 ft. to Peak.

Size	Weight Crated	Price
15x15 —1 door, 4 windows	2900	$210 00
15x17½—2 " 4 "	3250	235 00
15x20 —2 " 6 "	3500	260 00
15x22½—2 " 6 "	3850	285 00
15x25 —2 " 8 "	4200	310 00
15x27½—4 " 8 "	4550	335 00
15x30 —4 " 8 "	4900	360 00
15x32½—4 " 10 "	5250	385 00
15x35 —4 " 10 "	5600	410 00

Partitions reaching to the eaves may be placed as desired, without extra charge.

PHOTOGRAPH GALLERIES.

Same price as above, only add $15.00 net for sky and side-lights, 3 panels wide. No extra charge for dark room or partitions. Good curtains will be substituted for partitions when desired.

PRICE LIST OF HOUSES 17½ FT. WIDE.

7 ft. 6 in. to Eaves, 14 ft. to Peak.

17½x17½—2 doors, 6 windows	3700	$259 00
17½x20 —2 " 6 "	4100	286 00
17½x22½—2 " 6 "	4500	313 00
17½x25 —3 " 8 "	4900	340 00
17½x27½—4 " 8 "	5400	367 00
17½x30 —4 " 8 "	5800	394 00
17½x32½—4 " 10 "	6200	421 00
17½x35 —4 " 10 "	6600	448 00

Partitions with doors may be placed where wanted. As few or as many windows and doors may be ordered as wanted, and they can be placed anywhere as they are all interchangeable.

PHOTOGRAPH GALLERIES.

Same price as above, only add $20.00 net for side and sky-lights, 3 panels wide. No extra charge for dark room or partitions. Good curtains will be substituted for partitions if desired.

PRICE LIST OF HOUSES 20 FT. WIDE.

7 ft. 6 in. to Eaves, 15 ft. to Peak.

Size	Weight Crated	Price
20x20 —2 doors, 8 windows	4700	$312 00
20x22½—2 " 8 "	5150	341 00
20x25 —3 " 8 "	5600	370 00
20x27½—3 " 8 "	6050	399 00
20x30 —4 " 10 "	6500	428 00
20x32½—4 " 10 "	6950	457 00
20x35 —4 " 12 "	7400	486 00

Partitions with doors may be placed where wanted. Doors and windows may be changed to suit.

PHOTOGRAPH GALLERIES.

Same as above only add $20.00 net for sky and side lights, 3 panels wide. No extra charge for dark room or partitions. Good curtains will be substituted for partitions if desired.

Price List of Piazzas.

7½ ft. wide,

Figure outside edge to go around a corner.

Size	Weight	Price
5½x 5	280	$ 15 00
7½x 5	350	18 00
7½x 7½	420	22 50
7½x10	560	30 00
7½x12½	700	37 50
7½x15	840	45 00
7½x17½	980	52 50
7½x20	1020	60 00
7½x22½	1160	67 50
7½x25	1300	75 00
7½x27½	1440	82 50
7½x30	1580	90 00
7½x32½	1720	97 50
7½x35	1860	105 00

Price List of Lean-tos.

7½ ft. wide.

Can be attached to the house anywhere, and used for Kitchen, Bed-room or Store-room.

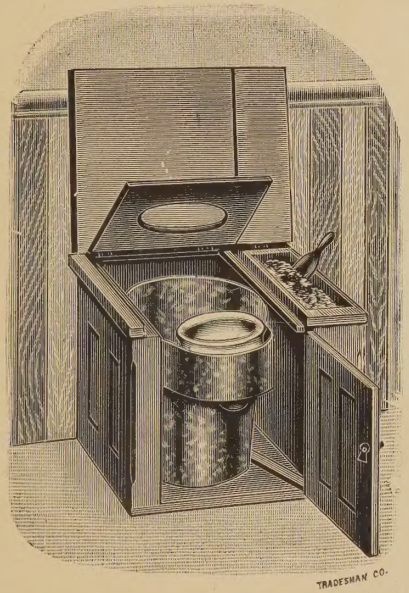
Size	Weight	Price
7½x 7½	730	$ 39 00
7½x10	890	47 00
7½x12½	1050	55 00
7½x15	1210	63 00
7½x17½	1370	71 00
7½x20	1530	79 00
7½x22½	1690	87 00
7½x25	1850	95 00
7½x27½	2010	103 00
7½x30	2170	111 00
7½x32½	2330	119 00
7½x35	2490	127 00

THE IRON COTTAGE COMPANY

Manufacturers of....

THE SANITARY EARTH CLOSET.

PATENTED NOVEMBER 11, 1890.



Style of No. 114 Earth Closet.

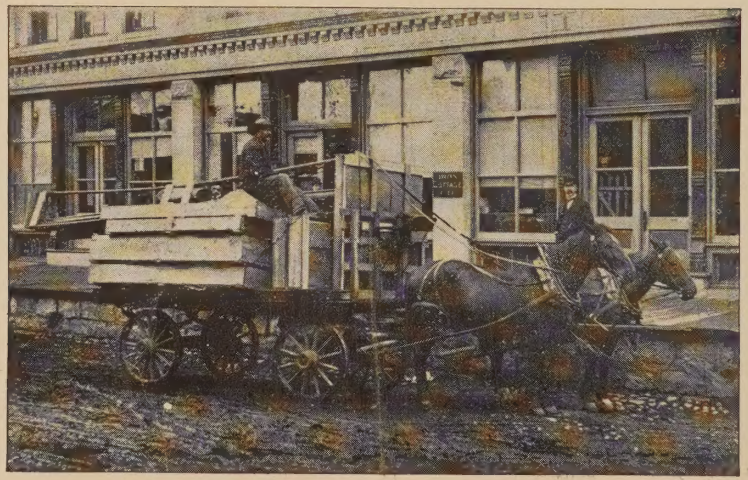
In many houses there are no water works or sewers. In such cases the problem of the disposition of the night soil is of the utmost importance. Science has demonstrated that it is dangerous to life and health to deposit in privy vaults, as many wells have been poisoned from such contamination. It is well known that if the night soil is mixed with an equal amount of *dry* earth or sifted ashes, that all odors are immediately absorbed, and that in short time the mass resembles rich garden soil, and is perfectly inoffensive to sight or smell. With the knowledge of these facts before us, it is evident that it is only necessary to provide four or five barrels of dry earth, kept in a dry place, and one empty barrel for changing, and the **Leonard Sanitary Earth Closet** and the great problem is solved. This is the most perfect apparatus ever devised for this purpose. The urine separator is a common stone china chamber, and the pail is made of galvanized iron. It has a bail not shown in the cut. The case is ash, antique finish. The illustration shows the general features of the article.

DIMENSIONS AND PRICE OF No. 114.

Telegraph	Number	Height	Width	Depth	Price
Economy	114	18	27½	21	$10 00

THE IRON COTTAGE COMPANY

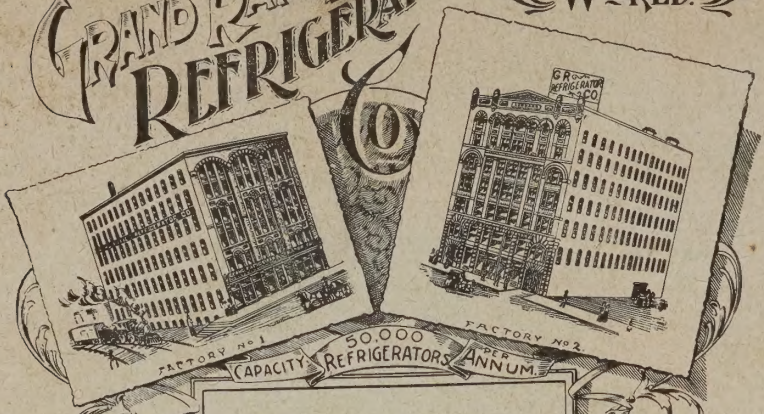
GRAND RAPIDS, MICHIGAN.



The above Photo Engraving shows one of our houses (size 10 x 30 feet) crated for shipment. Its weight is only 3420 lbs., and it occupies only 300 cubic feet of space. Two such houses can be loaded on one wagon. The house can be set up in half a day by two men, without the use of screws or nails.

Works of the Grand Rapids Refrigerator Co

LARGEST IN THE WORLD.

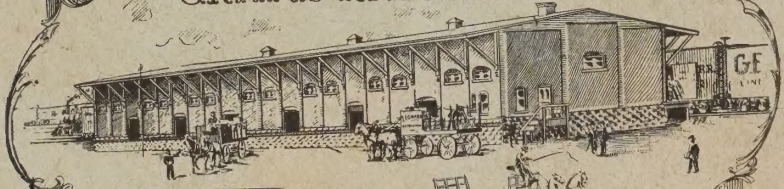


CAPACITY 50,000 REFRIGERATORS PER ANNUM.

WARE HOUSE No 1
100 x 100 FT.

HOLDS 15,000 REFRIGERATORS

GRAND RAPIDS, MICH.



WARE HOUSE No 2.
273 x 66 FT.
22 FT HIGH INSIDE
HOLDS
15,000 REFRIGERATORS

H. LEONARD & SONS,
PROPRIETORS.

WEST MICHIGAN PRINT.